

# **FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT**

## **2009 Drought Water Bank**

**For a Water Transfer from  
Participating Tehama-Colusa Canal Authority  
Member Contractors to  
Participating San Luis Delta-Mendota Water  
Authority Member Contractors**

**U.S. Department of the Interior  
Bureau of Reclamation  
Mid-Pacific Region**

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**2009 DROUGHT WATER BANK SUPPLEMENTAL ENVIRONMENTAL  
ASSESSMENT FOR A WATER TRANSFER FROM  
PARTICIPATING TEHAMA-COLUSA CANAL AUTHORITY MEMBER  
CONTRACTORS TO  
PARTICIPATING SAN LUIS DELTA-MENDOTA WATER AUTHORITY  
MEMBER CONTRACTORS**

**1. INTRODUCTION**

To help facilitate the transfer of water throughout the State, the California Department of Water Resources (DWR) initiated a 2009 Drought Water Bank (DWB). To implement the DWB, DWR purchases water from willing sellers upstream of the Sacramento-San Joaquin Delta (Delta) and conveys this water, using State Water Project (SWP) or Central Valley Project (CVP) facilities, to water users that are at risk of experiencing water shortages in 2009 due to drought conditions and that require supplemental water supplies to meet anticipated demands. The Mid Pacific Region of the Bureau of Reclamation participates in the DWB to ensure that operations of the CVP and SWP can be coordinated effectively to maximize the ability of the DWB to move water from willing sellers to buyers to address critical water needs. Reclamation reviews and approves, as appropriate, proposed transfers by CVP contractors in accordance with the Interim Guidelines for the Implementation of Water Transfers under the Central Valley Project Improvement Act (CVPIA).

The Finding of No Significant Impact (FONSI) and Final Environmental Assessment (EA) for the 2009 DWB dated April 15, 2009 are available at [http://www.usbr.gov/mp/nepa/nepa\\_projdetails.cfm?Project\\_ID=3591](http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3591). The 2009 DWB Final EA analyzed a total of up to 199,885 acre-feet (af) of water that could be made available from CVP contractors for transfer through a combination of crop idling, crop substitution, groundwater substitution, and reservoir reoperation, and would be available for purchase by public and private water providers in California based on certain needs criteria developed by DWR (<http://www.water.ca.gov/drought/>). The 2009 DWB Final EA analyzed a maximum of 140,528 af of water made available for transfer by crop idling/substitution transfers and 56,600 af by groundwater substitution by CVP contractors. To date the California Department of Water Resources (DWR) has purchased only a total of 36,307 af from CVP contractors through the 2009 DWB. 7,817 af of this water was made available by crop idling and 28,490 af was made available by groundwater substitution.

The Tehama-Colusa Canal Authority (TCCA) is a Joint Powers Authority comprised of 17 Central Valley Project water service contractors. The service area spans four counties (Tehama, Glenn, Colusa, and Yolo) along the west side of the Sacramento Valley, providing irrigation water to farmers growing a variety of permanent and annual crops. TCCA operates and maintains the 140 mile Tehama-Colusa and Corning canals irrigation water supply system. The service area is approximately 150,000 acres (Tehama Colusa Canal Authority 2009). The TCCA member contractors were identified as potential buyers in the 2009 DWB EA. However, due to unanticipated increases to their CVP allocation from what was initially forecast, TCCA now has identified that some of its

member districts have water available for transfer as potential sellers. Accordingly, the TCCA has requested Reclamation approval of transfer of this water to San Luis Delta-Mendota Water Authority (SLDMWA) for use by their member agencies. SLDMWA was identified in the 2009 DWB EA as a potential buyer.

The proposed action would involve transfer of a total of up to 30,000 af (up to 7,000 af by crop shifting and up to 28,000 af by groundwater substitution). In order to provide flexibility, the quantities by source being analyzed and disclosed in this supplemental EA are maximum quantities that could be made available for transfer by each method. However, the total quantity of water transferred under the proposed action will not exceed 30,000 af. These transfer quantities, when added to DWB transfer quantities, are below the maximum quantities analyzed in the 2009 DWB Final EA, and the impacts associated with the proposed action were analyzed and disclosed in the 2009 DWB Final EA. Additional analyses in accordance with the National Environmental Policy Act would be required if additional transfers are identified that would result in the total transfer quantities analyzed in the 2009 DWB Final EA being exceeded. Accordingly, this supplemental EA is intended to analyze and disclose this change from what was described in the 2009 DWB EA.

## **1.1 PURPOSE AND NEED**

Water Year 2009 is the third consecutive dry year for the state. Water Year 2007-08 resulted in 63 percent of average annual precipitation across the state, and Water Year 2008-09 resulted in 72 percent of average annual precipitation (DWR 2009). In June 2008, Governor Arnold Schwarzenegger signed Executive Order S-06-08 proclaiming a condition of statewide drought. In February 2009, Gov. Schwarzenegger declared a state of emergency due to drought conditions statewide.

By the end of June 2009, statewide precipitation stood at 75 percent of average for this water year. This water year has had below normal precipitation thus far, with an exceptionally dry January. Statewide reservoir storage at the end of June, 2009 was 83% of average for the date, with individual key reservoirs much lower. While some reservoirs are slightly higher than a year ago, San Luis Reservoir is much lower than this time last year. San Luis Reservoir stores water that has been conveyed through the Sacramento-San Joaquin Delta (Delta) for the CVP and State Water Projects. On July 28, 2008, San Luis Reservoir held 22 percent of capacity, or 43 percent of average storage. Due to demand draw down, and pumping restrictions through the Delta, in accordance with the current U.S. Fish and Wildlife Service and National Marine Fisheries Service Biological Opinions for the Coordinated Operations of the CVP and State Water Project, San Luis Reservoir has dropped to 18 percent of capacity, or 35 percent of average on July 28, 2009 (DWR 2009).

There is a need for flexibility in water management to address the previously described conditions and limitations for water users downstream of the Delta, such as SLDMWA member contractors. One potential mechanism identified is to facilitate water transfers to

respond to emergency shortages. As a result of unanticipated hydrologic conditions and a resulting increased allocation for CVP contractors from what was initially forecast, participating TCCA member contractors have determined that they have a quantity of CVP water available that is surplus to their needs and the participating TCCA member contractors desire to make this surplus water available for purchase and use by participating SLDMWA member contractors. The purpose of the proposed action is to facilitate efficient water management and flexibility through approval of the transfer of water from participating TCCA member contractors to participating SLDMWA member contractors for use within the existing service areas of the participating SLDMWA member contractors to help alleviate the impacts on existing crops of reduced irrigation allocations of CVP water.

## **2. ALTERNATIVES**

### **2.1 No Action**

Under the no action alternative, Reclamation would not approve the proposed transfer of CVP water from participating TCCA member contractors to participating SLDMWA member contractors; and would continue to approve transfers to the DWB as described in the 2009 DWB Final EA.

### **2.2 Proposed Action**

Reclamation proposes to approve the proposed transfer of up to 30,000 af of CVP water from participating TCCA member contractors to participating SLDMWA member contractors in accordance with the Interim Guidelines for the Implementation of Water Transfers under the Central Valley Project Improvement Act (CVPIA) and within the transfer quantities analyzed in the 2009 DWB Final EA.

Participating TCCA Member Contractors propose to make available up to 30,000 acre-feet (af) of CVP water which would have otherwise been diverted from the Sacramento River and delivered from the Tehama-Colusa and Corning Canals under the participating TCCA member contractors' water service contracts.

The transfer water would be made available through a combination of groundwater substitution (up to 28,000 af) and voluntary crop shifting actions (up to 7,000 af) implemented by the participating TCCA member contractors during the 2009 water year. As previously stated, the total quantity of water transferred under the proposed action will not exceed 30,000 af. These actions were taken in the beginning of the 2009 water year when initial CVP water allocations were announced at 10%. In response, the water districts and farmers in those districts increased groundwater pumping, altered cropping patterns and purchased additional water from water suppliers in the basin. Because of the increased precipitation in February through May 2009 period, Reclamation increased the water supply allocation for each transferor to 40% of contract supply in May 2009. However, because of the cropping and water use decisions that water users within each transferor's service area had already made, the additional allocation from Reclamation would be the source of the surplus that each transferor is offering to be a part of the proposed water transfer. Crop shifting resulted generally from the reductions in the

amount of corn, tomatoes, cotton, and onions in production and replacement of these crops with less water intensive plantings of beans, sunflower, vineseed, and wheat. Crop shifting actions under the proposed action would not include rice fields.

Table 1 provides a summary of the participating TCCA member contractors and the amount of water made available for transfer. The water made available through groundwater substitution includes a 12% reduction factor which is consistent with the percent reduction used for groundwater substitution credits to the State of California 2009 Drought Water Bank.

**Table 1. Water Transfer Maximum Quantities**

<b>District</b>	<b>Total CVP Water Quantity</b>
4M Water District	250
Colusa County Water District	7,000
Cortina Water District	250
Dunnigan Water District	700
Holthouse Water District	900
LaGrande Water District	2,800
Orland-Artois Water District	5,000
Thomes Creek Water District	600
Westside Water District	12,500
<b>Total</b>	<b>30,000</b>

Where applicable in the water-use analysis, the unit values for evapotranspiration of applied water (ETAW) are from the California Department of Water Resources' (DWR) White Paper, Water Transfers Based on Crop Shifting and Crop Idling for DWR's 2009 Drought Water Bank and Bureau of Reclamation's Water Acquisition Program, dated August 22, 2008. These values were used to determine the quantity of water available for transfer through implementation of the 2009 crop shifting. The DWR's White Paper, Groundwater Substitution Transfers, How to Make Them Work in the Sacramento Valley in 2009, dated August 22, 2008, was used to assist in the determination of the quantity of water available for transfer through 2009 groundwater substitution.

The transfer would be undertaken in a manner that allows Reclamation to accrue control of the transfer water at the Red Bluff Diversion Dam and to convey such water through the Delta for subsequent diversion in Old River. The diverted water would later be delivered to the participating SLDMWA member contractors. Reclamation will, to the

extent possible, operate the CVP and coordinate these operations with DWR to facilitate the conveyance of the transfer water through the Delta and south to the participating SLDMWA member contractors. All transfer water will be conveyed through and diverted in the Delta by September 30, 2009 and either delivered to the participating SLDMWA member contractors by February 29, 2010, or rescheduled into storage at San Luis Reservoir by February 29, 2010.

The transfer water will be pumped with available capacity at either Banks or Jones Pumping Plants, and CVP Project use energy will be used. If available capacity at either Banks or Jones Pumping Plants is limited to facilitate this transfer, and other transfer arrangements during 2009, the available capacity will be allocated proportionately among all such actions and only after CVP-wide commitments have been met. No specific priority for available capacity will be provided for the purposes of delivery pursuant to this transfer.

The total quantity of transferred water to be delivered to the participating SLDMWA member contractors will be reduced by an estimated 15-25 percent to account for Delta carriage losses. The actual carriage losses will be determined by Reclamation for the period the transfer water is conveyed through the Delta.

The transferred water would be used within the areas serviced by the San Luis and Delta-Mendota canals to irrigate only lands that were under irrigation during the last 3-year period (2006-2008) and the delivery of the transfer water to such lands, in addition to Reclamation's allocation of CVP water to those lands, would not exceed the total CVP contract quantity for the respective CVP contractors receiving the transfer water. No conversion of habitat for fish and wildlife species would occur as a result of application of the water made available under the proposed action. The conditions that have made the transfer water available, as previously described, would have existed notwithstanding the proposed transfer. No additional change in crop patterns, surface or groundwater use, fish and wildlife habitat or other conditions in the service areas of the transferors would occur as a result of the transfer.

### **3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

This section discusses the affected environment and environmental consequences of the proposed action. The proposed action would not affect the following resources beyond what was analyzed and disclosed in the 2009 DWB EA: groundwater, water quality, geology and soils, air quality, power, cultural resources, socioeconomics, environmental justice, climate change, aesthetics, recreation, noise, hazardous and toxic waste, Indian trust assets and transportation and traffic. The proposed action would not have any cumulative effects beyond what was analyzed in the 2009 DWB EA. Therefore, these resource categories are not analyzed in further detail.

### **3.1 Groundwater**

#### **No Action**

Because the water use decisions in the transferor's service area, including increased groundwater pumping, were already made in anticipation of a lower CVP allocation than was actually implemented, the no action alternative would be the same as the existing condition and conditions under the proposed action.

#### **Proposed Action**

Under the proposed action, up to 28,000 af of water would be made available for transfer via groundwater substitution. While this amount of water would be coming from different entities than those listed in the 2009 DWB EA, it would still be coming from within the Sacramento Valley Groundwater Basin, as analyzed in the 2009 DWB EA and the total quantity of water transferred under the 2009 DWB and the proposed action would be less than the maximum quantity analyzed in the 2009 DWB EA. Therefore the impacts of the proposed action would be within those analyzed in the 2009 DWB EA.

## **4. CONSULTATION AND COORDINATION**

An administrative draft of this EA has been circulated for review by Reclamation staff.

#### **Endangered Species Act Section 7 Consultation**

Reclamation is coordinating with the U.S. Fish and Wildlife Service to amend the 2009 DWB Biological Opinion to include the participating TCCA districts as sellers. Reclamation has determined that the proposed action would not affect special status species beyond what was analyzed and disclosed for the 2009 DWB.

#### **California Environmental Quality Act**

The Governor of the State of California has declared a state of emergency regarding drought conditions. In accordance with this declaration, TCCA and the SLDMWA are filing a Notice of Exemption regarding California Environmental Quality Act compliance.

#### **Public Review**

This supplemental EA and FONSI documents are being posted on Reclamation's website. A press release was issued on August 31, 2009 by the Bureau of Reclamation's Mid-Pacific Regional Public Affairs Office.

## **6. LIST OF PREPARERS**

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## **7. REFERENCES**

DWR 2009. <http://www.water.ca.gov/drought/>